

~~CONFIDENTIAL~~~~CONFIDENTIAL~~~~INTER-COMPANY CORRESPONDENCE~~

(INSERT NAME)

COMPANY CARBIDE AND CARBON CHEMICALS COMPANY

LOCATION

Post Office Box P
OAK RIDGE, TENN.

UNCLASSIFIED

TO K. M. Jones
LOCATION K-1101

DATE October 19, 1955

ANSWERING LETTER DATE

ATTENTION

COPY TO

L. L. Anthony R. C. Rhees
J. C. Barton J. E. Rothfleisch
C. C. Fowlkes P. R. Vanstrum
T. Kwasnoski M. F. Schwenn
D. M. Lang S. H. Smiley
C. H. Mahoney H. G. P. Snyder
J. A. Parsons Technical Division K-1005 File (K25RC) ✓SUBJECT Water Sampling Program for
Mercury, September 1955

KLI-3621

R C

In compliance with the request of the meeting of September 2, 1955, on "Cooling Water and Freon Condenser Failures," the sampling program for mercury was set up and carried out through the month of September. The results, which are presented in Table I, not only show the level of mercury which is entering the plant at the K-891 pumphouse, but also the quantities which are leaving the Y-12 area.

The East Fork junction sample is a continuous, semi-weekly sample taken primarily for the purpose of measuring the radioactivity in the water at that point. The K-891 Supply sample is a continuous sample set up and taken approximately every 2 - 3 days by Utilities Operations. The daily effluent from Y-12 was obtained over a two-week period by the Health Physics Department at Y-12 from a continuous sampler placed in Poplar Creek at the weir behind the Y-12 plant by personnel of the Special Analysis Department. The weekly composite of effluent from Y-12 represents a composite of daily dip samples taken by Y-12 personnel.

At present, only the East Fork junction and the K-891 Supply samples are being analyzed.

T. C. Whitson
T. C. Whitson
Special Analysis Department
Technical Division

APPROVAL FOR RELEASE

Document: # KLI-3621; Date 10/19/55
Title/Subject 2-page ltr., TC Whitson to KM Jones, Water Sampling Program for Mercury, September 1955

Approval for unrestricted release of this document is authorized by the Oak Ridge K-25 Site Classification and Information Control Office, Martin Marietta Energy Systems, Inc., PO Box 2003, Oak Ridge, TN 37831-7307.

Arvin S. Quist
K-25 Classification & Information Control OfficerDate 2/3/93~~CONFIDENTIAL~~

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by authority of: Arvin S. Quist, 1/29/93
K-25 Site Classification Officer

(Authorized Declassifier's name and organization)

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TABLE I

WATER SAMPLING PROGRAM FOR MERCURY, SEPTEMBER 1955

Date	East Fork Junction With Poplar Creek, ppb. Hg	K-891 Supply, ppb. Hg	Daily Eff- luent From Y-12 at Weir, ppb. Hg	Weekly Composite of Effluent from Y-12	
				K-25 Anal. ppb. Hg	Y-12 Anal. ppm. Hg
9/9			820	990	1.16
9/12			870		
9/13	640		2460		
9/14			2240		
9/15			1870		
9/16	220		1910	1900	1.89
9/17 through 9/18			1500		
9/19		0	2110		
9/20	120		1860		
9/21		16	----		
9/22			1020		
9/23	110	22		1680	1.09
9/27	170				
9/30		32		1040	0.84

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INTER-COMPANY CORRESPONDENCE

(INSERT
NAME)

COMPANY

UNION CARBIDE NUCLEAR COMPANY

LOCATION

Post Office Box P
OAK RIDGE, TENN.

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TO K. M. Jones
LOCATION K-1101

DATE December 12, 1955

ANSWERING LETTER DATE

ATTENTION

COPY TO L. L. Anthony
J. C. Barton
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D. M. Lang
C. H. Mahoney
R. C. Rhees
J. E. Rothfleisch (35)
M. F. Schwenn
S. H. Smiley
H. G. P. Snyder
P. R. Vanstrum
Technical Division K-1005 File (K
Technical Division K-1401 File (K

SUBJECT Water Sampling Program
for Mercury, October and
November 1955

KLI-3654

APPROVAL FOR RELEASE

Document # KLI-3654 ; Date 12/12/1955
Title/Subject 2-page ltr, TKwasnoski/TCWhitson to
KM Jones, "Water Sampling" Program for Mercury,
October and November 1955
Approval for unrestricted release of this document is authorized by the Oak
Ridge K-25 Site Classification and Information Control Office, Martin
Marietta Energy Systems, Inc., PO Box 2003, Oak Ridge, TN 37831-7307.
Arvin S. Quist 2/3/93
K-25 Classification & Information Control Officer Date

Additional data on the mercury content of K-25 area waters have been com-
piled for the months October and November 1955. Continuous semi-weekly
samples were taken from the following points: East Fork junction with
Poplar Creek, K-891 supply water, K-1513 pumphouse influent and effluent
from the water purification plant.

The results, expressed in parts per billion of mercury, are presented
in Table I.

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TABLE I

MERCURY CONTENT OF K-25 AREA WATERS, OCTOBER AND NOVEMBER 1955

Date	East Fork Junction with Poplar Creek ppb. Hg	Clinch River at K-1513 Pumphouse ppb. Hg	Effluent from Water Purifica- tion Plant ppb. Hg	K-891 Supply Water ppb. Hg
10/4	68	5	1	
10/10	1440	7	5	
10/11	460	7	4	
10/14	640	5	4	
10/18	344	---	8	68
10/21	588	8	7	17
10/24	----	---	---	18
10/25	768	5	1	----
10/26	----	---	---	36
10/28	1056	0	0	32
11/4	480	2	3	
11/8	168	5	7	
11/14	376	4	4	45
11/16	360	8	8	22
11/18	204	6	6	94
11/21	----	----	---	98
11/22	424	22	7	---
11/23	---	---	---	128
11/25	156	6	7	16
11/30	344	7	14	86

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INTER-COMPANY CORRESPONDENCE

(INSERT
NAME)

COMPANY CARBIDE AND CARBON CHEMICALS COMPANY

LOCATION Post Office Box P
OAK RIDGE, TENN.

UNCLASSIFIED

TO K. M. Jones
LOCATION K-1101

DATE January 26, 1956

ANSWERING LETTER DATE

ATTENTION

COPY TO L. L. Anthony
J. C. Barton
C. C. Fowlkes
D. M. Lang
C. H. Mahoney
R. C. Rhees
J. E. Rothfleisch (35)
M. F. Schwenn
S. H. Smiley
H. G. P. Snyder
P. R. Vanstrum

SUBJECT Water Sampling Program
for Mercury, December 1955

KLI-3693

Technical Division K-1005 File (K25RC)
Technical Division K-1401 File (K25RC)

Additional data on the mercury content of K-25 area waters for the month of December is presented. Continuous semi-weekly samples were taken from the following points: East Fork junction with Poplar Creek, Clinch River at K-1513 pumphouse, effluent from the water purification plant, and the K-891 supply water.

The results expressed in parts per billion of mercury are shown in table I.

The results of three special samples taken from C, E, and G loops on December 30th are presented in table II.

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By authority of: Arvin S. Quist, 1/29/93

K-25 Site Classification Officer

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(date)
2/3/93
(date)
(Document verification verified by)

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T. C. Whitson
T. C. Whitson

T. Kwasnoski
T. Kwasnoski
Special Analysis Department
Technical Division

APPROVAL FOR RELEASE

Document: # KLI-3693; Date 1/26/56

Title/Subject 2-page ltr, Whitson & Kwasnoski to
KM Jones, "Water Sampling Program for Mercury,
December 1955"

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Arvin S. Quist 2/3/93
K-25 Classification & Information Control Officer Date

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

TABLE I
MERCURY CONTENT OF K-25 AREA WATERS, DECEMBER 1955

Date	East Fork Junction with Poplar Creek ppb. Hg	Clinch River at K-1513 Pumphouse ppb. Hg	Effluent from Water Purifica- tion Plant ppb. Hg	K-891 Supply Water ppb. Hg
12/2	243	14	7	30
12/5	80	8	7	98
12/9	312	8	13	25
12/12	----	----	----	26
12/13	336	2	5	----
12/14	----	----	----	75
12/16	248	19	14	27
12/19	----	----	----	68
12/20	200	8	8	----
12/21	----	----	----	37
12/23	272	4	6	72
12/26	----	----	----	40
12/27	656	7	0	----
12/29	320	12	7	----

TABLE II
SAMPLES FROM C, E, AND G LOOPS, DECEMBER 30th

Date	"C" Loop ppb. Hg	"E" Loop ppb. Hg	"G" Loop ppb. Hg
12/30	68	80	78

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UNCLASSIFIED INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

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To: W. C. Hartman
K-1101

Plant: Oak Ridge Gaseous Diffusion

Date: October 7, 1957

Copies To: J. C. Barton
C. C. Fowlkes
K. M. Jones
S. Katz
T. Kwasnoski
D. M. Lang
C. H. Mahoney
J. E. Rothfleisch (3)
M. F. Schwenn
S. H. Smiley
H.G.P. Snyder
P. R. Vanstrum
B. R. Webb
T. C. Whitson
Technical Division K-1005 File
Technical Division K-1401 File

Subject: Water Sampling Program for
Mercury - July, August, and
September, 1957

KLI-4236-1

APPROVAL FOR RELEASE

Document # KLI-4236-1; Date 10/7/57
Title/Subject 3-pages, TC Whitson/T Kwasnoski to
WC Hartman, "Water Sampling Program for Mercury-
July, August, and September 1957"
Approval for unrestricted release of this document is authorized by the Oak
Ridge K-25 Site Classification and Information Control Office, Martin
Marietta Energy Systems, Inc. PO Box 2003, Oak Ridge, TN 37831-7307.
Arvin S. Quist 2/3/93
K-25 Classification & Information Control Officer Date

Data on the mercury content of the Oak Ridge Gaseous Diffusion Plant area waters for the months of July, August, and September, 1957 are presented. Continuous semi-weekly samples were taken from the East Fork at the junction with Poplar Creek, at K-891 supply point, and at the K-901 make-up point. These results, expressed in parts per billion of mercury, are shown in table I.

In addition, analyses were made on monthly composite samples from the following points: Clinch River one mile downstream, Clinch River at K-1513 pumphouse, and the effluent from the water purification plant. These results are shown in table II. The results of monthly samples from the C, E, and G loops are shown in table III.

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KLI-4236-1

by authority of: Arvin S. Quist, 1/29/93
K-25 Site Classification Officer

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UNCLASSIFIED

October 7, 1957

TABLE I

MERCURY CONTENT OF OAK RIDGE GASEOUS DIFFUSION PLANT AREA WATERS

Date	Poplar Creek at East Fork Junction, ppb. Hg	K-891 Supply Water, ppb. Hg	K-901 Make-up Point, ppb. Hg
7-2-57	132	58	--
7-5-57	292	66	--
7-9-57	140	--	--
7-16-57	232	--	--
7-20-57	108	--	--
7-23-57	88	--	--
7-26-57	16	--	--
7-30-57	58	--	--
8-2-57	18	--	--
8-6-57	14	--	--
8-10-57	232	--	--
8-17-57	116	--	--
8-24-57	100	--	--
8-31-57	136	--	--
9-7-57	100	--	--
9-14-57	44	--	18
9-21-57	144	--	0
9-28-57	128	--	0

~~CONFIDENTIAL~~

KLI-4236-1

W. C. Hartman

-3-

October 7, 1957

TABLE II

MERCURY CONTENT OF MONTHLY COMPOSITE SAMPLES

Month	Clinch River One Mile Downstream, at K-1513	Clinch River Pumphouse, Purification Plant,	Effluent From Water
	ppb. Hg	ppb. Hg	ppb. Hg
July	0	0	0
August	0	0	0
September	0	0	0

TABLE III

MERCURY CONTENT OF SAMPLES FROM C, E, AND G LOOPS

Date	"C" Loop, ppb. Hg	"E" Loop, ppb. Hg	"G" Loop, ppb. Hg
7-2-57	44	72	76

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KLI 3705 Parts

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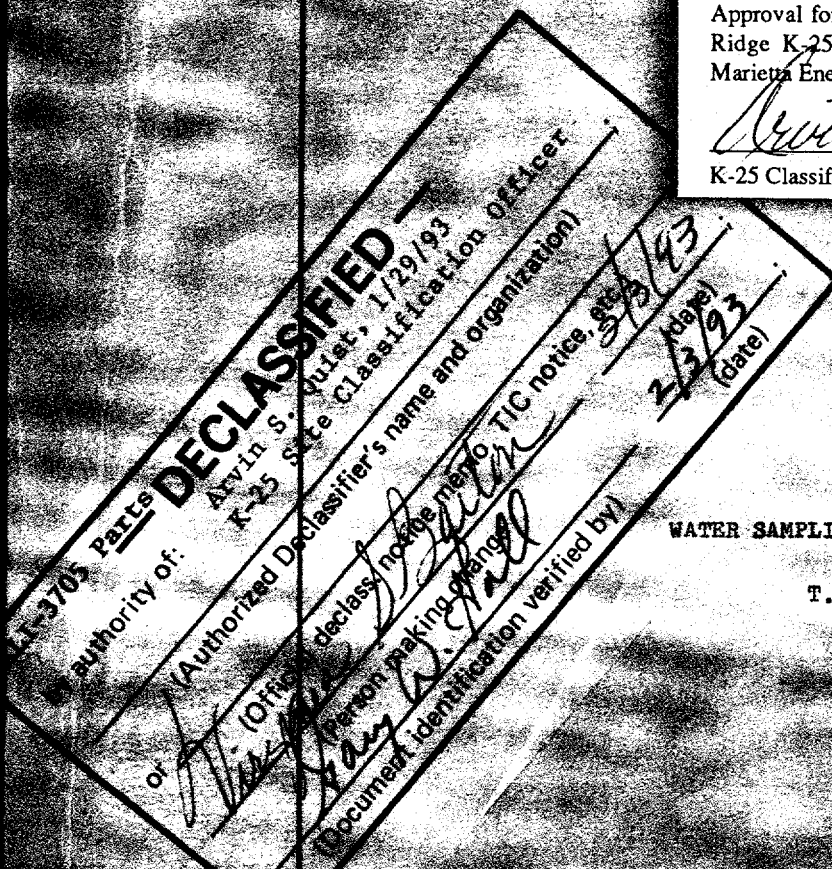
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Document # KLI-3705 Parts; Date _____
Title/Subject WATER SAMPLING PROGRAM FOR MERCURY
by TC Whitson

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Arvin S. Whitson
K-25 Classification & Information Control Officer

2/3/93
Date



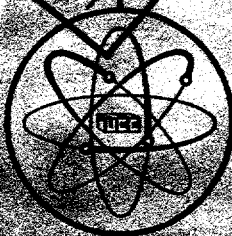
WATER SAMPLING PROGRAM FOR MERCURY

T. C. Whitson

UNION CARBIDE NUCLEAR COMPANY

A DIVISION OF UNION CARBIDE AND CARBON CORPORATION

Oak Ridge, Tennessee



Approved Under U. S. Government Contract W7405-eng-26

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INTER-COMPANY CORRESPONDENCE

(INSERT
NAME)

COMPANY

CARBIDE AND CARBON CHEMICALS COMPANY

LOCATION

Post Office Box P
OAK RIDGE, TENN.TO
LOCATIONK. M. Jones
K-1101

DATE February 10, 1956

ANSWERING LETTER DATE

ATTENTION
COPY TO

L. L. Anthony
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D. M. Lang
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J. A. Parsons
R. C. Rhees
J. E. Rothfleisch (35)
M. F. Schwenn
S. H. Smiley
H. G. P. Snyder
P. R. Vanstrum
Technical Division K-1005 File (K25RC) ✓
Technical Division K-1401 File (K25RC)

SUBJECT Water Sampling Program
for Mercury, January 1956

KLI-3705-1

A report of the mercury content of K-25 area waters for the month of January is presented. Continuous semi-weekly samples were taken from the following points: East fork junction with Poplar Creek, Clinch River at K-1513 pumphouse, effluent from water purification plant, and K-891 supply water.

The results expressed in parts per billion of mercury are shown in Table I.

The results of three samples taken from C, E, and G Loops on January 30th are presented in Table II.

T. C. Whitson
T. C. Whitson
Special Analysis Department
Technical Division

TCW:jd

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THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

TABLE I

RESULTS OF WATER SAMPLING PROGRAM FOR JANUARY, 1956

<u>Date</u>	<u>East Fork Junction with Poplar Creek ppb. Hg</u>	<u>Clinch River at K-1513 Pumphouse ppb. Hg</u>	<u>Effluent from Water Purifi- cation Plant ppb. Hg</u>	<u>K-891 Supply Water ppb. Hg</u>
1/3	240	8	22	---
1/5	---	--	--	60
1/6	256	5	5	30
1/10	108	4	8	25
1/13	216	2	4	82
1/14	----	---	---	84
1/17	392	7	14	94
1/18	---	---	---	114
1/20	900	2	14	60
1/24	88	7	14	---
1/27	196	8	7	---
1/31	176	28	36	---

TABLE II

SAMPLES FROM C, E, AND G LOOPS, JANUARY 30th

<u>Date</u>	<u>"C" Loop ppb. Hg</u>	<u>"E" Loop ppb. Hg</u>	<u>"G" Loop ppb. Hg</u>
1/30/56	42	64	80

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INTER-COMPANY CORRESPONDENCE

(INSERT
NAME)

COMPANY

UNION CARBIDE NUCLEAR COMPANY

LOCATION

Post Office Box P
OAK RIDGE, TENN.

TO K. M. Jones
LOCATION K-1101

DATE March 7, 1956

ANSWERING LETTER DATE

ATTENTION

COPY TO L. L. Anthony

J. C. Barton

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J. E. Rothfleisch (35)

M. F. Schwenn

H. G. P. Snyder

P. R. Vanstrum

Technical Division K-1005 File (K25RC) ✓

Technical Division K-1401 File (K25RC)

SUBJECT Water Sampling Program
for Mercury, February 1956

KLI-3705-2

Data on the mercury content of K-25 area waters for the month of February are presented. Continuous semi-weekly samples were taken from the following points: East Fork junction with Poplar Creek, Clinch River at K-1513 pumphouse, effluent from the water purification plant, and K-891 supply water.

The results expressed in parts per billion of mercury are shown in Table I. The results of 3 special samples taken from C, E, and G Loops on February 26 are presented in Table II.

T. C. Whitson
T. C. Whitson
Special Analysis Department
Technical Division

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TABLE I

MERCURY CONTENT OF K-25 AREA WATERS, FEBRUARY 1956

<u>Date</u>	<u>East Fork Junction with Poplar Creek ppb. Hg</u>	<u>Clinch River at K-1513 Pumphouse ppb. Hg</u>	<u>Effluent from Water Purification Plant ppb. Hg</u>	<u>K-891 Supply Water ppb. Hg</u>
2/1	---	---	---	14
2/3	---	---	---	4
2/4	0	4	5	---
2/7	16	7	5	---
2/10	72	2	5	14
2/13	153	8	11	---
2/17	68	2	5	4
2/20	16	12	7	4
2/24	44	2	4	8
2/28	68	7	4	---

TABLE II

SAMPLES FROM C, E, AND G LOOPS, FEBRUARY 26, 1956

<u>Date</u>	<u>"C" Loop ppb. Hg</u>	<u>"E" Loop ppb. Hg</u>	<u>"G" Loop ppb. Hg</u>
2/26	12	5	22

CONFIDENTIAL

INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: K. M. Jones
K-1101

Plant: Oak Ridge Gaseous Diffusion

Date: April 20, 1956

Copies To: L. L. Anthony
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M. F. Schwenn
S. H. Smiley
H. G. P. Snyder
P. R. Vanstrum
Technical Division K-1005 File (RC) ✓
Technical Division K-1401 File (RC)

Subject: Water Sampling Program
for Mercury, March 1956

CLI-3705-3

Data on the mercury content of Oak Ridge Gaseous Diffusion Plant area waters for the month of March is presented. Continuous semi-weekly samples were taken from the following points: East Fork Junction with Poplar Creek, Clinch River at K-1513 pumphouse, effluent from the water purification plant, and K-891 supply water. An additional sampling point, Clinch River one mile below last plant area effluent, has been included in this report.

The results expressed in parts per billion of mercury are shown in Table I.

The results of three special samples taken from C, E, and G loops on March 30 are presented in Table II.

T. C. Whitson
T. C. Whitson
Special Analysis Department
Technical Division

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TABLE I

MERCURY CONTENT OF K-25 AREA WATERS, MARCH 1956

Date	East Fork Junction with Poplar Creek ppb. Hg	Clinch River One Mile Below Last Plant Effluent ppb. Hg	Clinch River at K-1513 Pumphouse ppb. Hg	Effluent from Water Purifica- tion Plant ppb. Hg	K-891 Supply Water ppb. Hg
3/2/56	40	---	0	0	22
3/6/56	52	4	0	0	0
3/7/56	---	--	--	--	9
3/9/56	48	19	0	4	--
3/13/56	156	0	48	17	28
3/16/56	188	70	28	36	14
3/20/56	20	4	5	2	--
3/23/56	28	4	7	5	--
3/26/56	32	5	1	4	--
3/30/56	100	8	5	4	16

TABLE II

SAMPLES FROM C, E, AND G LOOPS, MARCH 1956

Date	"C" Loop ppb. Hg	"E" Loop ppb. Hg	"G" Loop ppb. Hg
3/30/56	32	11	47

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~~INTER-COMPANY CORRESPONDENCE~~

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: K. M. Jones
K-1101

Plant: Oak Ridge Gaseous Diffusion

Date: June 25, 1956

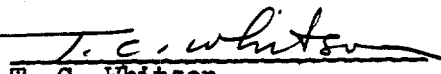
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M. F. Schwenn
S. H. Smiley
H. G. P. Snyder
P. R. Vanstrum
Technical Division K-1005 File (RC)
Technical Division K-1401 File (RC)

Subject: Water Sampling Program for
Mercury, April and May 1956

KLI-3705-4

Data on the mercury content of Oak Ridge Gaseous Diffusion Plant area waters for the months of April and May are presented. Continuous semi-weekly samples were taken from the following points: east fork junction with Poplar Creek, Clinch River one mile downstream, Clinch River at the K-1513 pumphouse, effluent from water purification plant, and K-891 supply water.

The results expressed in parts per billion of mercury for the month of April are shown in Table I and the results for the month of May are shown in Table II. A significant drop in the level of the east fork samples over previous periods is evident. The results of three special samples taken from C, E, and G loops on May 26th are shown in Table III.


T. C. Whitson
Special Analysis Department
Technical Division

TCW:jd

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TABLE I

MERCURY CONTENT OF OAK RIDGE GASEOUS DIFFUSION PLANT
AREA WATERS, APRIL 1956

Date	East Fork Junction with Poplar Creek, ppb. Hg	Clinch River One Mile Downstream, ppb. Hg	Clinch River at K-1513 Pumphouse, ppb. Hg	Effluent from Water Purifica- tion Plant, ppb. Hg	K-891 Supply Water, ppb. Hg
4/2/56					17
4/3/56	16	4	8	6	--
4/6/56	24	14	0	0	1
4/10/56	4	0	1	4	6
4/13/56	8	0	0	0	--
4/17/56	2	0	0	0	--
4/20/56	12	0	2	0	--
4/24/56	12	6	8	6	--
4/27/56	0	0	0	0	11
4/30/56	--	--	--	--	

TABLE II

MERCURY CONTENT OF OAK RIDGE GASEOUS DIFFUSION PLANT
AREA WATERS, MAY 1956

Date	East Fork Junction with Poplar Creek, ppb. Hg	Clinch River One Mile Downstream, ppb. Hg	Clinch River at K-1513 Pumphouse, ppb. Hg	Effluent from Water Purifica- tion Plant, ppb. Hg	K-891 Supply Water, ppb. Hg
5/1/56	0	0	0	7	--
5/4/56	29	0	0	0	--
5/8/56	0	0	0	0	--
5/11/56	0	0	0	0	--
5/15/56	0	0	0	0	--
5/18/56	0	0	0	0	--
5/22/56	0	0	26	10	--
5/23/56	--	--	--	--	65
5/25/56	65	10	13	5	33
5/26/56	--	--	--	--	16
5/29/56	72	13	15	52	--

TABLE III

SAMPLES FROM C, E, AND G LOOPS, MAY 26, 1956

"C" Loop, ppb. Hg	"E" Loop, ppb. Hg	"G" Loop, ppb. Hg
71	85	75

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INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: K. M. Jones
K-1101

Plant: Oak Ridge Gaseous Diffusion

Date: August 3, 1956

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T. C. Whitson
Technical Division K-1005 File (RC) ✓
Technical Division K-1401 File (RC)

Subject: Water Sampling Program
for Mercury, June 1956

KLI-3705-5

Data on the mercury content of Oak Ridge Gaseous Diffusion Plant area waters for the month of June are presented. Continuous semi-weekly samples were taken from the following points: east fork junction with Poplar Creek, Clinch River one mile downstream, Clinch River at K-1513 pumphouse, effluent from water purification plant, and K-891 supply water.

The results expressed in parts per billion of mercury for the month of June are shown in Table I. A significant increase in the level of the east fork samples over recent periods is evident for the first part of the month. The results of three special samples taken from C, E, and G loops on June 30 are shown in Table II.

T. C. Whitson

T. C. Whitson

Special Analytical Services Department
Technical Division

TCW:jd

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TABLE I

MERCURY CONTENT OF ORGDP AREA WATERS, June 1956

Date	East Fork Junction with Poplar Creek, ppb. Hg	Clinch River One Mile Downstream, ppb. Hg	Clinch River at K-1513 Pumphouse, ppb. Hg	Effluent from Water Purifi- cation Plant, ppb. Hg	K-891 Supply Water ppb. Hg
6/1/56	1158	62	54	62	290
6/5/56	1360	62	0	0	4
6/8/56	1158	0	0	4	7
6/12/56	72	0	0	29	0
6/15/56	72	0	0	0	---
6/20/56	376	0	0	0	---
6/25/56	0	13	7	11	---
6/26/56	0	11	4	0	43
6/29/56	145	11	13	11	33

TABLE II

SAMPLES FROM C, E, AND G LOOPS, June 30th

"C" Loop, ppb. Hg	"E" Loop, ppb. Hg	"G" Loop, ppb. Hg
58	65	72

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R. C. Whitson

Technical Division, Dept. of P.E. & E.

Technical Division, Dept. of P.E. & E.

Subject: Water Sampling Program
for Mercury, July and
August 1976

UIC-3705-8

Data on the mercury content of Oak Ridge gaseous diffusion area waters for the months of July and August are presented. Sixteen semi-weekly samples were taken from the following locations: East Fork junction with Apple Creek, K-501 supply water, K-501 at the K-1513 pump, K-501 from the water purification plant, and Clinch River one mile downstream. Weekly analyses or samplings the last three of the above locations were discontinued during August and an analysis was made on a composite from each location at the end of the month.

The results are shown in units of micrograms per liter for the months of July and August and are shown in Table 1. The results of the samples taken from K-501 and K-1513 are shown in Table 2.

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11-3703-6

2

TABLE I

MERCURY CONTENT OF OAK RIDGE GASEOUS DIFFUSION PLANT WASTE WATER
JULY AND AUGUST 1956

Date	East Fork Junction with Poplar Creek, ppb. Hg	Clinch River One Mile Downstream, ppb. Hg	Clinch River at K-1513 Pumphouse, ppb. Hg	Effluent from Purifi- cation Plant, ppb. Hg	K-691 Supply Water, ppb. Hg
7/3/56	58	4	4	4	33
7/6/56	16	2	3	3	2
7/10/56	50	3	2	-	---
7/13/56	3	0	0	0	16
7/17/56	44	0	0	0	---
7/20/56	24	0	7	7	---
7/24/56	12	3	7	1	---
7/27/56	35	8	1	3	172
7/31/56	13	5	0	1	35
8/3/56	15	3	10	3	---
8/7/56	44	8	12	8	---
8/10/56	120	-	--	-	20
8/14/56	100	-	--	-	12
8/17/56	16	-	--	-	---
8/21/56	536	-	--	-	---
8/24/56	34	-	--	-	---
8/31/56	156	12*	1*	1*	78

*Monthly Composite

TABLE II

SAMPLES FROM C, E, AND G LOOPS, JULY 56

C Loop, ppb. Hg	E Loop, ppb. Hg	G Loop, ppb. Hg
68	92	126

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UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

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K-1101

Plant: Oak Ridge Gaseous Diffusion

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Technical Division K-1005 File (RC) ✓
Technical Division K-1401 File (RC)

Subject: Water Sampling Program
for Mercury, September
and October 1956

KLI-3705-7

Data on the mercury content of Oak Ridge Gaseous Diffusion Plant area waters for the months of September and October are presented. Continuous semi-weekly samples were taken from East fork at junction with Poplar Creek and the K-891 supply water. The results of the analyses expressed in parts per billion are shown in Table I.

Poplar Creek samples continue to show significant quantities of mercury. In addition, analyses were made on monthly composite samples from the following points: Clinch River one mile downstream, Clinch River at K-1513 pumphouse, and the effluent from the water purification plant. These results are shown in Table II.

T. C. Whitson

T. C. Whitson
Laboratory Services Section
Special Analytical Services Department
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Technical Division

TCW:jd

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TABLE I

MERCURY CONTENT OF OAK RIDGE GASEOUS DIFFUSION PLANT
AREA WATERS, SEPTEMBER AND OCTOBER 1956

<u>Date</u>	<u>East Fork Junction with Poplar Creek, ppb. Hg</u>	<u>K-891 Supply Water, ppb. Hg</u>
9/4/56	224	---
9/9/56	100	---
9/11/56	146	---
9/14/56	32	---
9/18/56	30	---
9/21/56	72	92
9/24/56	236	---
9/28/56	156	---
10/2/56	204	---
10/5/56	183	---
10/9/56	76	---
10/12/56	28	---
10/16/56	40	---
10/17/56	---	16
10/19/56	146	---
10/22/56	76	---
10/24/56	---	282
10/26/56	246	21
10/30/56	---	31
10/31/56	378	32

TABLE II

MERCURY CONTENT IN MONTHLY COMPOSITE SAMPLES

<u>Month</u>	<u>Clinch River, One mile downstream, ppb. Hg</u>	<u>Clinch River, at K-1513 Pumphouse, ppb. Hg</u>	<u>Effluent from Purification Plant, ppb. Hg</u>
September	0	0	0
October	0	0	0

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A Division of Union Carbide and Carbon Corporation

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K-1101

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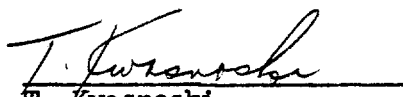
Subject: Water Sampling Program
for Mercury, November
and December 1956

KLI-3705-8

Data on the mercury content of Oak Ridge Gaseous Diffusion Plant area waters for the months of November and December 1956 are presented. Continuous semi-weekly samples were taken from east fork at junction with Poplar Creek and the K-891 supply water. The results of the analyses expressed in parts per billion are shown in Table I.

In addition, analyses were made on monthly composite samples from the following points: Clinch River one mile downstream, Clinch River at K-1513 pumphouse, and the effluent from the water purification plant. These results are shown in Table II. Results on three loop samples taken on December 30th are shown in Table III.


T. C. Whitson


T. Kwasnoski
Laboratory Services Section
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Technical Division

/ja

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TABLE I

MERCURY CONTENT OF OAK RIDGE GASEOUS DIFFUSION PLANT
AREA WATERS, NOVEMBER AND DECEMBER 1956

Date	East Fork Junction with Poplar Creek, ppb. Hg	K-891 Supply Water ppb. Hg
11/2/56	14	----
11/6/56	244	----
11/10/56	116	----
11/12/56	336	52
11/13/56	831	----
11/16/56	----	112
11/20/56	148	----
11/23/56	160	44
11/27/56	600	----
11/31/56	324	----
12/7/56	56	----
12/11/56	60	----
12/17/56	32	----
12/18/56	260	----
12/21/56	52	----
12/26/56	40	----

TABLE II

MERCURY CONTENT IN MONTHLY COMPOSITE SAMPLES

Month	Clinch River, One Mile Downstream ppb. Hg	Clinch River, at K-1513 Pumphouse ppb. Hg	Effluent from Purification Plant ppb. Hg
November	0	2	Opp. Error
December	4	2	4

TABLE III

SAMPLES FROM C, E, AND G LOOPS, DECEMBER 29TH

"C" Loop, ppb. Hg	"E" Loop, ppb. Hg	"G" Loop, ppb. Hg
46	0	56

INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

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To: Mr. L. L. Anthony
K-303-8

Plant: Oak Ridge Gaseous Diffusion

Date: May 1, 1957

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Technical Division K-1401 File (RC)

Subject: Water Sampling Program for
Mercury - January, February,
and March, 1957

KLI-3705-9

Data on the mercury content of the Oak Ridge Gaseous Diffusion Plant area waters for the months of January, February, and March are presented. Continuous semi-weekly samples were taken from East Fork at the junction with Poplar Creek and the K-891 supply water. The results of the analyses expressed in parts per billion are shown in table I.

In addition, analyses were made on monthly composite samples from the following points: Clinch River one mile downstream, Clinch River at K-1513 pumphouse, and the effluent from the water purification plant. These results are shown in table II. Results of monthly samples from C, E, and G loops are shown in table III. The results of East Fork samples for this report period are significantly higher than those obtained in November and December 1956.

/evo

T. C. Whitson

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-2-

May 1, 1957

TABLE I

MERCURY CONTENT OF OAK RIDGE GASEOUS DIFFUSION PLANT
AREA WATERS - JANUARY, FEBRUARY, AND MARCH 1957

Date	East Fork Junction with Poplar Creek, ppb. Hg	K-891 Supply Water, ppb. Hg
1/1/57	540	7
1/4/57	2176	--
1/8/57	336	--
1/11/57	354	68
1/15/57	516	--
1/18/57	456	--
1/22/57	784	--
1/25/57	560	56
1/29/57	7	2
1/30/57	---	4
2/1/57	40	8
2/5/57	72	--
2/6/57	---	29
2/8/57	92	16
2/12/57	72	--
2/15/57	8	8
2/19/57	136	--
2/22/57	216	--
2/26/57	1236	--
3/1/57	354	148
3/5/57	940	--
3/8/57	208	52
3/12/57	228	--
3/19/57	60	--
3/21/57	128	--
3/26/57	140	--
3/29/57	136	--

TABLE II

MERCURY CONTENT IN MONTHLY COMPOSITE SAMPLES

Month	Clinch River One Mile Downstream, ppb. Hg	Clinch River at K-1513 Pump house, ppb. Hg	Effluent From Water Purification Plant, ppb. Hg
January	0	0	0
February	0	4	20
March	0	4	7

Mr. L. L. Anthony

-3-

May 1, 1957

TABLE III

MERCURY CONTENT OF
SAMPLES FROM C, E, AND G LOOPS

<u>Date</u>	<u>"C" Loop, ppb. Hg</u>	<u>"E" Loop, ppb. Hg</u>	<u>"G" Loop, ppb. Hg</u>
12-29-56	46	0	56
1-28-57	152	152	80
2-22-57	84	84	24

INTER-COMPANY CORRESPONDENCE

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To: L. L. Anthony
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Plant: Oak Ridge Gaseous Diffusion

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Subject: Water Sampling Program for
Mercury - April, May, and
June, 1957

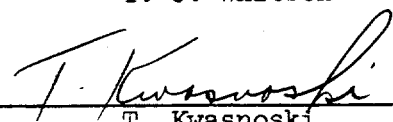
KLI-3705-10

Data on the mercury content of the Oak Ridge Gaseous Diffusion Plant area waters for the months of April, May, and June, 1957, are presented. Continuous semi-weekly samples were taken from East Fork at the junction with Poplar Creek and K-891 supply water. The results of the analyses expressed in parts per billion of mercury are shown in table I.

In addition, analyses were made on monthly composite samples from the following points: Clinch River one mile downstream, Clinch River at K-1513 pumphouse, and the effluent from the water purification plant. These results are shown in table II. The results of monthly samples taken from the C, E, and G loops are shown in table III.

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T. C. Whitson


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L. L. Anthony

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September 6, 1957

TABLE I

MERCURY CONTENT OF OAK RIDGE GASEOUS DIFFUSION PLANT AREA WATERS

Date	Poplar Creek at	K-891 Supply Water,
	East Fork Junction, ppb. Hg	
4-2-57	80	30
4-5-57	84	56
4-9-57	24	--
4-12-57	464	--
4-16-57	1024	52
4-23-57	108	--
4-26-57	160	60
4-30-57	392	70
5-3-57	10	52
5-4-57	--	72
5-7-57	44	81
5-10-57	304	68
5-12-57	--	112
5-13-57	--	86
5-14-57	320	136
5-17-57	56	38
5-21-57	62	--
5-24-57	24	140
5-28-57	184	--
5-31-57	200	368
6-4-57	64	34
6-7-57	68	--
6-11-57	0	4
6-14-57	0	--
6-18-57	416	--
6-21-57	56	468
6-25-57	46	--
6-28-57	64	40

L. L. Anthony

-3-

September 6, 1957

TABLE II

MERCURY CONTENT IN MONTHLY COMPOSITE SAMPLES

<u>Month</u>	<u>Clinch River One Mile Downstream, ppb. Hg</u>	<u>Clinch River at K-1513 Pumphouse, ppb. Hg</u>	<u>Effluent From Water Purification Plant, ppb. Hg</u>
April	0	0	10
May	4	0	4
June	14	4	14

TABLE III

MERCURY CONTENT OF SAMPLES FROM C, E, AND G LOOPS

<u>Date</u>	<u>"C" Loop, ppb. Hg</u>	<u>"E" Loop, ppb. Hg</u>	<u>"G" Loop, ppb. Hg</u>
5-29-57	192	152	560
6-28-57	44	72	76

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UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

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To: W. C. Hartman
K-1101

Plant: Oak Ridge Gaseous Diffusion

Date: October 7, 1957

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Subject: Water Sampling Program for
Mercury - July, August, and
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KLI-4236-1

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Data on the mercury content of the Oak Ridge Gaseous Diffusion Plant area waters for the months of July, August, and September, 1957 are presented. Continuous semi-weekly samples were taken from the East Fork at the junction with Poplar Creek, at K-891 supply point, and at the K-901 make-up point. These results, expressed in parts per billion of mercury, are shown in table I.

In addition, analyses were made on monthly composite samples from the following points: Clinch River one mile downstream, Clinch River at K-1513 pump house, and the effluent from the water purification plant. These results are shown in table II. The results of monthly samples from the C, E, and G loops are shown in table III.

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W. C. Hartman

October 7, 1957

TABLE I

MERCURY CONTENT OF OAK RIDGE GASEOUS DIFFUSION PLANT AREA WATERS

Date	Poplar Creek at East Fork Junction, ppb. Hg	K-891 Supply Water, ppb. Hg	K-901 Make-up Point, ppb. Hg
7-2-57	132	58	--
7-5-57	292	66	--
7-9-57	140	--	--
7-16-57	232	--	--
7-20-57	108	--	--
7-23-57	88	--	--
7-26-57	16	--	--
7-30-57	58	--	--
8-2-57	18	--	--
8-6-57	14	--	--
8-10-57	232	--	--
8-17-57	116	--	--
8-24-57	100	--	--
8-31-57	136	--	--
9-7-57	100	--	--
9-14-57	44	--	18
9-21-57	144	--	0
9-28-57	128	--	0
<i>12/18</i>	<i>Σ = 2098</i>		

W. C. Hartman

-3-

October 7, 1957

TABLE II

MERCURY CONTENT OF MONTHLY COMPOSITE SAMPLES

Month	Clinch River One Mile Downstream, ppb. Hg	Clinch River at K-1513 Pumphouse, ppb. Hg	Effluent From Water Purification Plant, ppb. Hg
July	0	0	0
August	0	0	0
September	0	0	0

TABLE III

MERCURY CONTENT OF SAMPLES FROM C, E, AND G LOOPS

Date	"C" Loop, ppb. Hg	"E" Loop, ppb. Hg	"G" Loop, ppb. Hg
7-2-57	44	72	76